

## Claims:

1. An apparatus for relieving dyspnoea in a subject, the apparatus comprising:  
an air supply means for providing an air supply at a pressure greater than ambient for  
5 delivery to the subject,  
a monitoring means for monitoring at least a part of at least one breathing cycle of the subject for determining an intrinsic positive end-expiratory pressure of a breathing cycle of the subject,  
a control means responsive to the monitoring means for controlling the pressure of the air  
10 supply delivered to the subject during an expiratory part of the breathing cycle at a pressure similar to the determined intrinsic positive end-expiratory pressure, and;  
a computing means for determining an average intrinsic positive end-expiratory pressure based on the intrinsic positive end-expiratory pressure monitored by the monitoring means over a plurality of breathing cycles, and the control means is responsive to the monitoring means for  
15 controlling the pressure of the air supply delivered to the subject during the expiratory part of each breathing cycle at a pressure similar to the determined average intrinsic positive end-expiratory pressure.
2. Apparatus as claimed in claim 1 in which the control means controls the pressure  
20 of the air supply delivered to the subject during at least a part of the inspiratory part of each breathing cycle at a pressure greater than the determined average intrinsic positive end-expiratory pressure.
3. Apparatus as claimed in claim 1 in which the monitoring means monitors each  
25 breathing cycle over the complete breathing cycle.
4. Apparatus as claimed in claim 1 in which the monitoring means is provided for locating adjacent the mouth of the subject.

5. Apparatus as claimed in claim 4 in which the monitoring means is provided for locating in one of a mouthpiece, a nasal mask and a face mask through which the air supply is delivered to the subject.

5 6. Apparatus as claimed in claim 1 in which the monitoring means is connected to the control means by hard wiring for relaying signals indicative of the intrinsic positive end-expiratory pressure from the monitoring means to the control means.

10 7. Apparatus as claimed in claim 1 in which a means for transmitting an airborne signal indicative of the intrinsic positive end-expiratory pressure from the monitoring means to the control means is provided, and the control means is provided with a receiving means for receiving the airborne signal transmitted from the monitoring means.

15 8. Apparatus as claimed in claim 1 in which the monitoring means is a pressure transducer for monitoring the pressure of air during the breathing cycles.

9. Apparatus for relieving dyspnoea in a subject; the apparatus comprising:  
an air supply means for providing an air supply at a pressure greater than ambient for delivery to the subject,

20 a monitoring means for monitoring at least a part of at least one breathing cycle of the subject for determining an intrinsic positive end-expiratory pressure of a breathing cycle of the subject,

a control means responsive to the monitoring means for controlling the pressure of the air supply delivered to the subject during an expiratory part of the breathing cycle at a pressure similar to the determined intrinsic positive end-expiratory pressure in which the apparatus comprises one of a  
25 mouthpiece, a nasal mask and a face mask, and;

a communicating means for communicating the air supply means with the one of the mouthpiece, nasal mask and face mask, in which an exhaust means is provided in the one of the mouthpiece, nasal mask and face mask for exhausting exhaled air from the subject, and a valving means is provided in the exhaust means, the valving means being operable under the control of  
30 the control means in response to the monitoring means for controlling the pressure of the air supply in the one of the mouthpiece, nasal mask and face mask.

10. Apparatus as claimed in claim 9 in which the valving means is a pressure regulating valving means.

11. Apparatus as claimed in claim 1 in which the apparatus is portable and is adapted  
5 for use by an ambulatory exercising subject.

12. Apparatus as claimed in claim 1 in which the air supply means comprises an electrically powered air blower motor.

10 13. A method for relieving dyspnoea in a subject, the method comprising the steps of:  
delivering an air supply to the subject at a pressure greater than ambient, monitoring at  
least a part of at least one breathing cycle of the subject for determining an intrinsic positive end-  
expiratory pressure of the subject, and  
controlling the pressure of the air supply being delivered to the subject during an  
15 expiratory part of each breathing cycle at a pressure similar to the determined intrinsic positive end-expiratory pressure, in which an average intrinsic positive end-expiratory pressure over a plurality of breathing cycles is determined, and the pressure of the air supply being delivered to the subject during the expiratory part of each breathing cycle is controlled at a pressure similar to the determined average intrinsic positive end-expiratory pressure.

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14. The method as claimed in claim 13 in which a complete breathing cycle of each monitored breathing cycle is monitored.

25 15. The method as claimed in claim 13 in which an air pressure adjacent the mouth of the subject is monitored for determining the intrinsic positive end-expiratory pressure.

16. The method as claimed in claim 13 in which the method is for relieving dyspnoea in an ambulatory exercising subject, and the method comprises the step of providing the air supply from a portable air supply means.